

The Leader Ship was destined to sink: An examination of dominance and prestige on the rise and fall of the narcissistic leader

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Abstract

Objective: Narcissistic leaders' engagement in strategies of dominance and/or prestige at different times across their leadership tenure could explain why they are perceived favorably as leaders early on, and unfavorably later on. Method: Over a 12-week period, we found that narcissism was positively associated with peer-rated leadership during initial group formation, but not later. Results: Dominance and prestige mediated these initial positive perceptions of narcissists as leaders. However, neither dominance nor prestige mediated the relationship between narcissism and leadership later on. Conclusions: The findings highlight a mechanistic role for dominance and prestige in explaining the rise and fall of narcissistic leaders over time.

Keywords: Narcissism, leadership, dominance, prestige, evolution

Highlights and Implications

- Narcissistic leaders are positively perceived initially but not over time. This temporal pattern of narcissistic leadership can be explained by dominance and prestige.
- Both dominance and prestige are viable paths to narcissistic leader emergence.
- Beyond leader emergence, narcissistic leadership wanes over time likely due to narcissists' characteristic dominance and lack of prestige.

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Narcissists have an overly-inflated sense of self that they actively preserve or enhance (Morf & Rhodewalt, 2001). One way that narcissists do this is to seek hierarchical social structures, and establish themselves at the pinnacle (Sedikides & Campbell, 2017). Indeed, narcissists are successful in their pursuit of leadership positions to elevate their social status (Brunell et al., 2008; Zitek & Jordan, 2016). Narcissists are usually effective in attaining such positions, as they tend to appear charming and are socially skilled, at least to unacquainted others (Brunell et al., 2008; Khoo & Burch, 2008). Further, narcissists perform well in public tasks and challenging situations (Nevicka et al., 2011; Roberts, Woodman, & Sedikides, 2018; Wallace & Baumeister, 2002). However, characteristic of narcissistic leadership is the overemphasis on the self at the expense of followers or organizations they lead (Rosenthal & Pittinsky, 2006). As a result, narcissists' effectiveness as leaders wanes over time (Ong et al., 2016), and with it their social status. Despite abundant theoretical accounts of the fall of narcissistic leaders across time, only one study to date (Ong et al., 2016) provides evidence of the mechanisms that explain this demise. Ong et al. found that changes in transformational leader behaviors across time accounted for why followers viewed narcissists favorably as leaders early on, but not later on. There remains a need for greater understanding of the mechanisms that underlie the narcissistic leader timeline. In this study, we examine the temporality of narcissistic leadership by investigating how dominance and prestige influence the rise and fall of narcissistic leaders over time.

Dominance and prestige as mechanisms

The Dominance-Prestige Model purports the pursuit of leadership to be an evolutionary product of having to navigate hierarchical social structures, and that leadership can be achieved uniquely through *dominance* and *prestige* (Cheng et al., 2013; Henrich &

Gil-White, 2001). Dominance refers to the attainment of leadership using intimidation and coercion, mainly through the induction of fear. In submitting to such leadership, followers allow leaders to gain social influence, which stabilizes rank hierarchies among groups (Henrich & Gil-White, 2001). Contrastingly, prestige refers to the granting of leadership to individuals who have demonstrated expertise, success, skills or knowledge that are valued and respected by others without the need for coercion. Individuals engaging in prestige behaviors are likely to share knowledge and skills with others, in return for follower deference (Henrich & Gil-White, 2001; Trivers, 1971). Despite the distinctiveness of dominance and prestige, both paths are viable and can coexist in the pursuit of leadership (Cheng et al., 2013). Further, the degrees to which dominance and prestige impact leadership are dependent on the perceiver and the context such that dominance-prestige follower perceptions can change across time.

Narcissistic characteristics such as assertiveness, dominance and power (Bradlee & Emmons, 1992; Küfner, Nestler, & Back, 2013) might allow narcissistic leaders to wield significant control over resources or decisions (Chatterjee & Hambrick, 2007; Nevicka et al., 2011). These dominant characteristics might offer a route for narcissists to be perceived as emergent leaders. Equally, narcissists' proclivity to being admired and socially popular (Leckelt et al., 2015; Paulhus, 1998) is likely due to their capacity to exhibit behaviors that are suggestive of abilities that others consider to be valuable. For example, narcissists' capacity to communicate charismatically about a specific vision could result in narcissists being perceived as having concrete plans and competencies to lead effectively. These characteristics would lead to narcissists being viewed as prestigious, and consequently considered as emergent leaders. Construing narcissistic behaviors that promote leader emergence as dominant and/or prestigious is consistent with previous empirical assertions

1 that both dominance and prestige are viable for achieving high social influence/leadership
2 (Cheng, Tracy, & Henrich, 2010; Cheng et al., 2013).

3 Beyond leader emergence, positive perceptions of narcissists as leaders dissipate (Ong
4 et al., 2016; Roberts et al., 2018; Sedikides & Campbell, 2017). This temporal downward
5 spiral could be explained by narcissists' persistence in dominance and/or an absence of
6 prestige across time. The early narcissistic dominance that facilitated leader emergence is
7 likely to manifest over time as reflecting disagreeable behaviors such as being exploitative
8 (Campbell et al., 2005). Indeed, the dominance that results in leadership effectiveness is
9 contingent on leader competence (Chen, Jing, & Lee, 2014), which might be less evident
10 over time because narcissists often do not perform any better than non-narcissists despite
11 their assertions (Roberts et al., 2018). Further, research into close relationships shows that the
12 exploitative and entitled aspects of narcissism, which are deemed as attractive at zero-
13 acquaintance, are often the most maladaptive in the long term (Back, Schmukle, & Egloff,
14 2010).

15 Adopting a prestige approach would likely result in follower perceptions toward a
16 leader that are robustly positive over time. However, such an approach usually requires the
17 leader to make contributions to the group without the certainty of follower deference. This is
18 a risk that narcissists are unlikely to take, given that they are primarily driven by self-
19 enhancement, and typically focused on the short-term, regardless of the impact on others
20 (Campbell et al., 2005). Prestige is also predicated on the avoidance of disagreeableness
21 (Cheng et al., 2010; 2013), which is in contrast to the high disagreeableness that characterizes
22 narcissism (Paulhus & Williams, 2002). This contrast in disagreeableness between narcissism
23 and prestige suggests that beyond strategies to project self-presentations of prestige early on,
24 employing prestigious strategies might not be the *modus operandi* of narcissistic leaders.

Indeed, the early prestige impressions that lead to leader emergence are likely either to disappear or to be perceived as disingenuous over time.

Present Research

Dominance and prestige appear to be viable mechanisms to explain the temporality of narcissistic leadership, but their influence remains unknown. Thus, the aim of this study was to examine the separate mediating roles of dominance and prestige on the relationship between narcissism and follower-perceived leadership over time. We tested these predictions by adopting both a longitudinal and a multi-wave approach, utilizing minimally acquainted groups working together over 12 weeks. We hypothesized that narcissists would be perceived as leaders initially, but not later on. Further, we hypothesized that dominance and prestige would mediate the relationship between narcissism and follower-perceived leadership during leader emergence but not later.

Method

Participants

Ninety-six senior-year students (69 men and 27 women; $M_{\text{age}} = 21.7$ years; $SD = 2.54$) enrolled in a psychology module participated in the study. We randomly assigned participants to 22 leaderless groups of four to five members ($n_{\text{four-member groups}} = 14$; $n_{\text{five-member groups}} = 8$); individuals remained in the same groups throughout the study. We did not assign a priori leader and follower roles, thus enabling participants to develop and/or display leader behaviors during the group tasks (cf. Ong et al., 2016). We obtained institutional ethical approval before the start of the study.

Measures

Narcissism. We assessed narcissism using the self-report Narcissism Personality Inventory-16 (NPI-16; Ames, Rose & Anderson, 2006). The NPI-16 comprises 16 pairs of forced-choice statements that are drawn from the original 40-item NPI, where participants are

asked to select the statement that best describes them. For each pair of statements, participants decide between a narcissistic statement (e.g., *I am an extraordinary person*) and a non-narcissistic statement (e.g., *I am much like everybody else*). Participants score one point for each narcissistic statement.

Leadership. We assessed peer ratings of leadership using Brunell and colleagues' (2008) measure, which assesses the extent to which each group member serves as a leader for a group task (e.g., *Group Member X assumed a leadership role in the group*, *Group Member X motivated other group members*). The six items are rated on a 7-point scale from 1 (*very inaccurate*) to 7 (*very accurate*).

Dominance and prestige. We assessed peer ratings of dominance and prestige with the Dominance and Prestige Rating Scales (Cheng et al., 2010). Eight items (e.g., *I am afraid of him/her*) correspond to dominance; nine items (e.g., *I respect and admire him/her*) correspond to prestige. The items are rated on a 7-point scale from 1 (*not at all*) to 7 (*very much*).

Procedure

We incorporated the study into a 12-week course as an experiential learning component of the class (cf. Ong et al., 2016). In the first week, we briefed participants that the study required them to work in groups to compete for points, gave assurances of confidentiality, and explained their right to withdraw from the study. After providing consent, participants completed a questionnaire pack including the NPI and demographic questions. In the second week, participants completed their first group task. The groups completed seven weekly tasks throughout the course, each lasting five minutes. The weekly tasks ranged from general knowledge activities (e.g., identifying the states of the United States of America) to problem-solving activities (e.g., number puzzles). We issued two activities concurrently each week to create the need for coordinated action. After completing the first group task in Week

2, participants rated their other group members' leadership and levels of dominance and prestige. They then completed the same measures after the group tasks in Weeks 4, 7 and 10. We presented feedback on group performance in a ranking table at the beginning of each weekly lecture. The groups competed against one another for points and the top three groups at the end of the study received cash prizes of £50, £30, £20, respectively.

Results

Descriptive statistics, correlations for all the variables are presented in Table 1. Narcissism and dominance correlated significantly at Time 1 ($r = .33$) and 2 ($r = .23$), but not at Time 3 ($r = .22$) and 4 ($r = .11$); the correlations between narcissism and prestige were non-significant across time (r s = $-.18$ to $.20$). Contrastingly, leadership and prestige correlated positively across all time points ($r = .58 - .67$). The correlations between leadership and dominance were significant at Time 1 ($r = .46$) and 2 ($r = .48$), but not at Time 3 ($r = -.14$) and 4 ($r = .12$). Similarly, the correlations between dominance and prestige were significant at Time 1 ($r = .53$) and 2 ($r = .27$) but not at Time 3 ($r = -.05$) and 4 ($r = -.15$).

Analytical Strategy

The proportion of missing cases per analysis in this study was 15.1%, which is common in psychology studies (Peugh & Enders, 2004). Nonetheless, to prevent potential bias brought about by missing data, we used multiple imputation analysis using the *mice* package (van Buuren & Groothuis-Oudshoorn, 2011) on R. We applied multiple imputation due to the missing data assumed to be Missing at Random. Our approach was substantiated by a significant Little (1988) Missing Completely at Random Test (MCAR; Chi-square = 2405.77, $df = 1760$, $p < .05$), which suggests that the data were not MCAR. Although 3-5 imputations are typically used in missing data analysis (Rubin, 1987), Graham, Olchowski and Gilreath (2007) recommend that greater numbers of imputations be performed to prevent power fall-off. Thus, we performed 20 imputations with 20 iterations per imputation, which

more than matched the proportion of missing cases (White, Royston, & Wood, 2010). We generated imputations at the item level rather than the scale level (Gottshall, West, & Enders, 2012) by creating a predictor matrix through the *quickpred* function, which generates modeling steps to the level of predictors and selects to the model only predictors that contain adequate information to impute the target variable. The condition for predictors to be included was set at .25 proportion of usable cases. Convergence of the Gibbs sampler is achieved when the variance between different sequences is not larger than the variance within each individual sequence (van Buuren & Groothuis-Oudshoorn, 2011). We checked convergence visually for all imputed variable means and standard deviations to ensure that all the imputation streams freely intermingled with one another, without showing definite trends. We conducted all analyses on each imputed dataset and pooled the final results using Rubin's (1987) equation.

We applied the social relations model to the peer ratings for leadership, dominance and prestige and extracted only *target effects* (see Kenny, 1994). We derived estimates of target effects for all the imputed datasets¹ using the *TripleR* package (Schönbrodt, Back, & Schmukle, 2012), while accounting for the multiple groups. After standardizing narcissism scores to control for sex differences (cf. Tschanz, Morf, & Turner, 1998) and group mean centering all variables, we tested the hypothesized mediating role of dominance and prestige on the narcissism-leadership relationship with multilevel mediation analyses¹. The proposed model comprised three hierarchical levels: time at Level 1, individuals at Level 2, and groups at Level 3. We calculated the indirect effect of the *a* path (narcissism predicting dominance and prestige separately) and *b* path (dominance and prestige separately predicting leadership) and subsequently tested this effect with the Monte Carlo Method for Assessing Mediation (MCMAM; Bauer, Preacher, & Gil, 2006; MacKinnon, Lockwood, & Williams, 2004)

calculator developed by Selig and Preacher (2008), specifying the 95% confidence interval and 20,000 repetitions.

Mediation analyses

A two-level growth model was specified to examine longitudinally the indirect effect of dominance and prestige on the narcissism – leadership relationship. The analyses demonstrated that neither dominance ($\beta_a = .002$, $SE = .005$, $p = .69$; $\beta_b = .06$, $SE = .05$, $p = .23$; indirect effect 95% CI $[-.001, .001]$) nor prestige ($\beta_a = -.001$, $SE = .004$, $p = .80$; $\beta_b = .17$, $SE = .07$, $p = .02$; indirect effect 95% CI $[-.002, .002]$) significantly mediated the relationship between narcissism and leadership over time (i.e., the 12-week duration of the study).

When examined at each specific time point, the analyses revealed a positive indirect effect of dominance on the relationship between narcissism and leadership that approached significance at Time 1 ($\beta_a = .20$, $SE = .09$, $p = .02$; $\beta_b = .22$, $SE = .13$, $p = .08$; indirect effect 95% CI $[-.005, .12]$), a positive indirect effect at Time 2 ($\beta_a = .28$, $SE = .09$, $p = .00$; $\beta_b = .36$, $SE = .11$, $p = .00$; indirect effect $[.03, .20]$), and non-significant indirect effects at Time 3 ($\beta_a = .15$, $SE = .08$, $p = .05$; $\beta_b = -.09$, $SE = .16$, $p = .57$; indirect effect $[-.08, .04]$) and Time 4 ($\beta_a = .10$, $SE = .08$, $p = .23$; $\beta_b = -.11$, $SE = .20$, $p = .60$; indirect effect $[-.08, .04]$). It is noteworthy that narcissism was associated with greater dominance across all time points apart from Time 4. Further, dominance seems to be a predictor of leadership only in the short-term (β_b at Time 1 and Time 2).

Prestige mediated the narcissism-leadership relationship at Time 1 ($\beta_a = .15$, $SE = .07$, $p = .03$; $\beta_b = .47$, $SE = .19$, $p = .01$; indirect effect 95% CI $[.001, .18]$) but not at Time 2 ($\beta_a = .10$, $SE = .07$, $p = .15$; $\beta_b = .37$, $SE = .16$, $p = .02$; indirect effect $[-.01, .12]$), Time 3 ($\beta_a = .10$, $SE = .07$, $p = .13$; $\beta_b = .67$, $SE = .19$, $p = .00$; indirect effect $[-.18, .02]$), or Time 4 ($\beta_a = .05$, $SE = .08$, $p = .52$; $\beta_b = .67$, $SE = .30$, $p = .02$; indirect effect $[-.17, .08]$). It is noteworthy

1 that prestige was a robust predictor of leadership across all four time points (i.e., the β_b
2 coefficients were positive and significant across all time points).

3 **Discussion**

4 The purpose of the present research was to examine the mediating roles of
5 dominance and prestige on the relationship between narcissism and leadership across time.
6 The longitudinal growth model analysis did not demonstrate a significant indirect effect of
7 narcissism predicting leadership via either dominance or prestige. Such a finding is
8 unsurprising due to the fickle nature of narcissistic leadership, as reflected in follower
9 perceptions in this study. However, when the temporal nature is examined at each individual
10 time point, narcissism predicted leadership via dominance initially but not later. The temporal
11 findings were as hypothesized and support the notion that dominance is a viable means to
12 leader emergence (Cheng et al., 2013). Additionally, the positive short-term relationship
13 between dominance and leadership suggests that regardless of narcissism, dominance is only
14 valuable to leadership in the short-term. Thus, the long-term effect of dominance was as
15 hypothesized and supports the notion that engaging in dominance is only advantageous for
16 narcissistic leadership in the short-term and is disadvantageous on a prolonged basis.

17 We found that prestige mediated the relationship between narcissism and leadership
18 initially, but not later on, as hypothesized. These findings dovetail previous empirical
19 evidence that suggests that prestige is a viable means to leader emergence (Cheng et al.,
20 2013). Additionally, it is noteworthy that prestige consistently predicted leadership across the
21 12 weeks. Narcissists' initial prestige is likely because their confidence, charisma and social
22 skills enabled them to convince followers of their domain-relevant expertise. The veracity of
23 narcissists' domain expertise would be more difficult for followers to ascertain in the
24 beginning, which might explain why narcissistic leaders' initial prestigious impression is
25 fleeting. For example, narcissistic leaders might project a superficial form of prestige by

engaging in behaviors such as name-dropping or boasting, rather than more sustained prestigious behavior such as demonstrating competence. The likely superficiality and short-term focus of narcissistic leaders' prestige could be potential reasons for the lack of sustained positive follower perceptions of narcissistic leadership and are worthy of future research attention.

Considering the results in concert, the findings of the current study are consistent with previous assertions that both dominance and prestige are viable ways to leadership attainment (Cheng et al., 2013), particularly among narcissists. Narcissists have a natural tendency toward dominance, and dominance positively sways members of minimally acquainted groups in the short-term. Prestige corresponded with positive perceptions toward narcissism leading to leader emergence. It is likely that any behaviors employed by narcissists regarding prestige are self-presentational in nature to promote a prestigious image, rather than being a genuine display of prestigious behavior (see also Roberts et al., 2018). The lack of perceived prestige over time may explain why narcissists were not perceived as leaders beyond the emergent phase.

Future research and applied implications

Achieving higher social status through leadership has never been more important than in today's society; where narcissists might be more adept at attaining self-enhancing leadership positions. However, as shown in the current study, narcissistic leaders, while effective in the short-term, are clearly inept at keeping their followers positive about their leadership across time, due to their perceived characteristic dominance and their perceived lack of sustained prestige.

A corollary to narcissistic leader emergence and preference for dominance is the context under which short-term self-enhancement behaviors are adopted. The nature of the groups in the current study – unstable social hierarchies of low-acquaintance individuals –

were conducive for narcissists to rise as leaders, but also susceptible to their leadership being usurped by followers (Hays & Bendersky, 2015). Such instability invokes an awareness that power is tenuous, which in turn compels narcissistic leaders to engage in dominance in order to prioritize their own power over group goals (Maner & Mead, 2010). The likely emergence of narcissistic leaders in unstable social hierarchies mirrors the rise of narcissistic world leaders in recent times of instability/uncertainty. Although the emergence of narcissistic leaders during unstable times is not a recent phenomenon in contemporary society (Sedikides & Campbell, 2017), narcissistic leaders' exploitation of increasingly dichotomous thinking (e.g., right- or left-wing, good or bad, us or them) is. Specifically, encouraging people to think more dichotomously intensifies in-group/out-group divisions, which legitimizes narcissistic leaders' use of dominance (Price & Van Vugt, 2014) – prolonging positive perceptions toward narcissistic leadership in the process. Narcissistic leaders' construction and/or maintenance of in-group/out-group divisions as a means of prolonging narcissistic leadership deserves attention in future research.

Another leader-follower paradigm to consider is that leaders in most organizations are no longer chosen or sanctioned by followers via a bottom-up approach, but rather are chosen by their superiors. This top-down leader selection is a reflection of how a dominance approach can be useful for leadership, even beyond the short-term. The applied ramifications of such leader selection and/or vindication practices are reflected in managers' perceptions that "managing upwards" is more instrumental to career success than managing followers (Sayles, 1993). Narcissists are well-positioned to benefit from these increasingly hierarchical, top-down societal structures because all that is required of them is to attain leadership positions, dominate their followers into submission and engage in strategies to please their superiors. This notion of focusing more on managing superiors than inspiring followers is consistent with narcissists' strategic self-protection efforts when experiencing ego threats

from high- and low-status individuals (Horton & Sedikides, 2009). Specifically, narcissists prefer to inflate their state self-esteem when insulted by high-status individuals, but react derogatorily when insulted by low-status individuals. Future examination of narcissistic leadership from the perspective of the superior could enable us to elucidate the dynamics behind narcissistic leaders' "upwards management".

Limitations

The main limitation of the present research is the single-study design with students across the course of an academic module. Although doing so afforded the opportunity to examine narcissistic leadership temporally, a single study based on a sample that was constrained by class size (essentially limiting the observations to 22 leaders) might lack robustness and generalizability. Nonetheless, this study acts as a valuable reference point from which future studies can aim to replicate the current findings with larger samples from other populations in different organizational and cultural settings, with the possibility of examining effects across different ethnic and gender² group compositions. The current study focused on follower perceptions of narcissists as leaders to examine the temporality of narcissistic leadership by utilizing a social relations model approach. Such an approach, however, does not directly account for the motivational and behavioral aspects of narcissistic individuals as they attempt to rise to, remain in, and fall out of leadership positions. Examining the temporality of narcissistic leadership from the perspective of the narcissist is thus worthy of future research. Next, this study comprised brief weekly group tasks, which set out to engage in partial replication of previous work on the temporality of narcissistic leadership (Ong et al., 2016). The total allocated time to complete all tasks was 70 minutes, which is similar to other studies that have examined the temporal effects of narcissistic leadership and that have reported the total time involved in group tasks. For instance, the group task employed by Nevicka et al. (2011) lasted for 30 minutes. However, this was

completed as a single task, whereas this study had seven tasks spread across a total duration of 12 weeks; future studies should consider the potential impact of task brevity and/or total task time.

Conclusions

The temporality of narcissistic leadership can be explained by two distinct routes to attaining social status in human societies: dominance and prestige. In this study, narcissists perceived as either dominant or prestigious were viewed as emergent leaders. Beyond leader emergence, follower perceptions of narcissistic leaders rapidly diminish. The lack of prestige after leader emergence led to the waning of narcissistic leadership across time.

Footnotes

¹ We used a random intercepts model. As expected, ICCs derived from the basic model for leadership target effects were .00 across all time points since group level variance has already been accounted for in the a priori round-robin analyses (cf. Kenny et al., 1992). ICCs derived for peer-rated leadership prior to accounting for group level effects were .00 at Time 1, .34 at Time 2, .40 at Time 3 and .60 at Time 4. Group differences are minimized if members are assigned randomly as observed in other studies that have used a similar small group zero-acquaintance paradigm, where substantive between group differences are absent. As group members become more acquainted across time, the effect of randomization is likely to wear out, resulting in more considerable group differences. Consequently, substantial group level effects were evident from the ICCs observed at Time 2, Time 3 and Time 4 of this study. With group level effects accounted for, the main effect of narcissism on leadership target effects was positive and significant at Time 1 ($\beta_0 = .21, SE = .10, p = .04$), but not at Time 2 ($\beta_1 = .11, SE = .10, p = .23$), Time 3 ($\beta_2 = -.05, SE = .10, p = .63$) and Time 4 ($\beta_3 = -.15, SE = .12, p = .22$). The β -coefficient was highest at Time 1 and lowest at Time 4.

² We conducted basic gender comparison analysis in relation to leader emergence. Of the 22 groups, 15 groups comprised members of both sexes. Five of the groups had male members emerge as leaders, while 10 groups had female members emerge as leaders. All groups where males emerged as leaders also tended to be higher in narcissism, whereas only three groups where females emerged as leaders were higher in narcissism. The emergent leaders of all seven same sex groups were also higher in narcissism. Overall, emergent leaders across the groups were rated higher in narcissism. Across the mixed sex groups, females were twice as likely to emerge as leaders relative to males, but were less likely than male emergent leaders to be higher in narcissism.

References

- Ames, D. R., Rose, P., & Anderson, C. P. (2006). The NPI-16 as a short measure of narcissism. *Journal of Research in Personality*, 40, 440-450. doi: 10.1016/j.jrp.2005.03.002
- Back, M. D., Schmukle, S. C., & Egloff, B. (2010). Why are narcissists so charming at first sight? Decoding the narcissism–popularity link at zero acquaintance. *Journal of Personality & Social Psychology*, 98, 132-145. doi: 10.1037/a0016338
- Bauer, D. J., Preacher, K. J., & Gil, K. M. (2006). Conceptualizing and testing random indirect effects and moderated mediation in multilevel models: new procedures and recommendations. *Psychological Methods*, 11, 142-163. doi: 10.1037/1082-989X.11.2.142
- Bradlee, P. M. & Emmons, R. A. (1992). Locating narcissism within the interpersonal circumplex and the five-factor model. *Personality and Individual Differences*, 13, 821-830. doi: 10.1016/0191-8869(92)90056-U
- Brunell, A. B., Gentry, W. A, Campbell, W. K., Hoffman, B. J., Kuhnert, K. W., & Demarree, K. G. (2008). Leader emergence: the case of the narcissistic leader. *Personality and Social Psychology Bulletin*, 34, 1663–1676. doi: 10.1177/0146167208324101
- Campbell, W. K., Bush, C. P., Brunell, A. B., & Shelton, J. (2005). Understanding the social costs of narcissism: The case of the tragedy of the commons. *Personality and Social Psychology Bulletin*, 31, 1358-1368. doi: 10.1177/0146167205274855
- Chatterjee, A., & Hambrick, D. C. (2007). It's all about me: Narcissistic chief executive officers and their effects on company strategy and performance. *Administrative Science Quarterly*, 52, 351–386. doi: 10.2189/asqu.52.3.351

- 1 Chen, F. F., Jing, Y., & Lee, J. M. (2014). The looks of a leader: Competent and trustworthy,
2 but not dominant. *Journal of Experimental Social Psychology*, *51*, 27-33. doi:
3 10.1016/j.jesp.2013.10.008
- 4 Cheng, J. T., Tracy, J. L., Foulsham, T., Kingstone, A., & Henrich, J. (2013). Two ways to
5 the top: Evidence that dominance and prestige are distinct yet viable avenues to social
6 rank and influence. *Journal of Personality and Social Psychology*, *104*, 103–125. doi:
7 10.1037/a0030398
- 8 Cheng, J. T., Tracy, J. L., & Henrich, J. (2010). Pride, personality, and the evolutionary
9 foundations of human social status. *Evolution and Human Behavior*, *31*, 334-347. doi:
10 10.1016/j.evolhumbehav.2010.02.004
- 11 Enders, C. K., & Tofighi, D. (2007). Centering predictor variables in cross-sectional
12 multilevel models: a new look at an old issue. *Psychological Methods*, *12*, 121-138.
13 doi: 10.1037/1082-989X.12.2.121
- 14 Gottschall, A. C., West, S. G., & Enders, C. K. (2012). A comparison of item-level and scale-
15 level multiple imputation for questionnaire batteries. *Multivariate Behavioral*
16 *Research*, *47*, 1–25. doi: 10.1080/00273171.2012.640589
- 17 Graham, J. W., Olchowski, A. E., & Gilreath, T. D. (2007). How many imputations are really
18 needed? Some practical clarifications of multiple imputation theory. *Prevention*
19 *Science*, *8*, 206–213. doi: 10.1007/s11121-007-0070-9
- 20 Hays, N. A., & Bendersky, C. (2015). Not all inequality is created equal: Effects of status
21 versus power hierarchies on competition for upward mobility. *Journal of Personality*
22 *and Social Psychology*, *108*, 867–882. doi: 10.1037/pspi0000017
- 23 Henrich, J., & Gil-White, F. J. (2001). The evolution of prestige: Freely conferred deference
24 as a mechanism for enhancing the benefits of cultural transmission. *Evolution and*
25 *Human Behavior*, *22*, 165-196. doi: 10.1016/S1090-5138(00)00071-4

- Horton, R. S., & Sedikides, C. (2009). Narcissistic responding to ego threat: When the status of the evaluator matters. *Journal of Personality*, 77, 1493-1526. doi:10.1111/j.1467-6494.2009.00590.x
- Kenny, D. (1994). *Interpersonal perceptions: A social relations analysis*. New York: Guildford Press.
- Kenny, D. A., Horner, C., Kashy, D. A., & Chu, L. (1992). Consensus at zero acquaintance: Replication, behavioral cues, and stability. *Journal of Personality and Social Psychology*, 62, 88-97. doi: 10.1037/0022-3514.62.1.88
- Küfner, A. C. P., Nestler, S., & Back, M. D. (2013). The two pathways to being an (un)popular narcissist. *Journal of Personality*, 81, 184–195. doi:10.1111/j.1467-6494.2012.00795.x
- Leckelt, M., Küfner, A. C., Nestler, S., & Back, M. D. (2015). Behavioral processes underlying the decline of narcissists' popularity over time. *Journal of Personality and Social Psychology*, 109, 856-871. doi: 10.1037/pspp0000057
- Little, R. J. (1988). A test of missing completely at random for multivariate data with missing values. *Journal of the American statistical Association*, 83(404), 1198-1202. doi: 10.1080/01621459.1988.10478722
- MacKinnon, D. P., Lockwood, C. M., & Williams, J. (2004). Confidence limits for the indirect effect: Distribution of the product and resampling methods. *Multivariate Behavioral Research*, 39, 99-128. doi: 10.1207/s15327906mbr3901_4
- Maner, J. K., & Mead, N. L. (2010). The essential tension between leadership and power: when leaders sacrifice group goals for the sake of self-interest. *Journal of Personality and Social Psychology*, 99, 482-497. doi:10.1037/a0018559

- 1 Nevicka, B., De Hoogh, A. H. B., Van Vianen, A. E. M., Beersma, B., & McIlwain, D.
2 (2011). All I need is a stage to shine: Narcissists' leader emergence and performance.
3 *The Leadership Quarterly*, 22, 910–925. doi: 10.1016/j.leaqua.2011.07.011
- 4 Ong, C. W., Roberts, R., Arthur, C. A., Woodman, T., & Akehurst, S. (2016). The leader ship
5 is sinking: A temporal investigation of narcissistic leadership. *Journal of Personality*,
6 84, 237-247. doi: 10.1111/jopy.12155
- 7 Paulhus, D. L. (1998). Interpersonal and intrapsychic adaptiveness of trait self-enhancement:
8 A mixed blessing?. *Journal of Personality and Social Psychology*, 74, 1197-1208.
9 doi: 10.1037/0022-3514.74.5.1197
- 10 Paulhus, D. L., & Williams, K. M. (2002). The dark triad of personality: Narcissism,
11 Machiavellianism, and psychopathy. *Journal of Research in Personality*, 36, 556-563.
12 doi: 10.1016/S0092-6566(02)00505-6
- 13 Peugh, J. L., & Enders, C. K. (2004). Missing data in educational research: A review of
14 reporting practices and suggestions for improvement. *Review of Educational*
15 *Research*, 74, 525-556. doi: 10.3102/00346543074004525
- 16 Price, M. E., & Van Vugt, M. (2014). The service-for-prestige theory of leader-follower
17 relations: A review of the evolutionary psychology and anthropology literatures. In R.
18 D. Arvey & S. M. Colarelli (Eds.), *Biological foundations of organizational behavior*
19 (pp. 169-201). Chicago: University of Chicago Press.
- 20 Roberts, R., Woodman, T., & Sedikides, C. (2018). Pass *me* the ball: Narcissism in
21 performance settings. *International Review of Sport and Exercise Psychology*, 11,
22 190-213. doi: 10.1080/1750984X.2017.1290815
- 23 Rosenthal, S., & Pittinsky, T. (2006). Narcissistic leadership. *The Leadership Quarterly*, 17,
24 617–633. doi: 10.1016/j.leaqua.2006.10.005
- 25 Rubin, D. B. (1987). *Multiple imputation for nonresponse in surveys*. New York: Wiley.

- 1 Sayles, L. R. (1993). *The working leader: The triumph of high performance over*
2 *conventional management principles*. New York: The Free Press.
- 3 Schönbrodt, F. D., Back, M. D., & Schmukle, S. C. (2012). TripleR: An R package for social
4 relations analyses based on round robin designs. *Behavior Research Methods*, 44,
5 455–470. doi: 10.3758/s13428-011-0150-4
- 6 Sedikides, C., & Campbell, W. K. (2017). Narcissistic force meets systemic resistance: The
7 energy clash model. *Perspectives on Psychological Science*, 12, 400-421. doi:
8 10.1177/1745691617692105
- 9 Selig, J. P., & Preacher, K. J. (2008, June). Monte Carlo method for assessing mediation: An
10 interactive tool for creating confidence intervals for indirect effects [Computer
11 software]. Retrieved from <http://quantpsy.org/>.
- 12 Trivers, R. L. (1971). The evolution of reciprocal altruism. *Quarterly Review of Biology*, 46,
13 35-57. doi: 10.1086/406755
- 14 Tschanz, B. B., Morf, C. C., & Turner, C. M. (1998). Gender differences in the structure of
15 narcissism: A multi-sample analysis of the Narcissistic Personality Inventory. *Sex*
16 *Roles*, 38, 863-870. doi: 10.1023/A:1018833400411
- 17 van Buuren, S., & Groothuis-Oudshoorn, K. (2011). mice: Multivariate imputation by
18 chained equations in R. *Journal of Statistical Software*, 45, 1-67. doi:
19 10.18637/jss.v045.i03
- 20 Wallace, H. M., & Baumeister, R. F. (2002). The performance of narcissists rises and falls
21 with perceived opportunity for glory. *Journal of Personality & Social Psychology*, 82,
22 819–834. doi: 10.1037/0022-3514.82.5.819
- 23 White, I. R., Royston, P., & Wood, A. M. (2011). Multiple imputation using chained
24 equations: Issues and guidance for practice. *Statistics in Medicine*, 30, 377–399.
25 doi: 10.1002/sim.4067

- 1 Zitek, E. M., & Jordan, A. H. (2016). Narcissism predicts support for hierarchy (at least when
- 2 narcissists think they can rise to the top). *Social Psychological and Personality*
- 3 *Science*, 7, 707-716. doi: 10.1177/1948550616649241

Table 1: Means, standard deviations, and zero-order correlations between narcissism, peer-rated leadership, dominance and prestige

		Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13
1	Narcissism	3.01	2.90	(.76)												
2	Leadership Time 1	4.42	1.02	.20	(.88)											
3	Leadership Time 2	4.41	0.69	.11	.59**	(.89)										
4	Leadership Time 3	4.50	0.72	-.05	.29**	.42**	(.93)									
5	Leadership Time 4	4.18	1.32	-.07	.36**	.28*	.28*	(.92)								
6	Dominance Time 1	2.72	0.76	.33**	.46**	.29**	-.19	.20	(.87)							
7	Dominance Time 2	2.84	0.82	.23*	.31**	.48**	-.10	.17	.72**	(.89)						
8	Dominance Time 3	2.94	0.73	.22	.22*	.30**	-.14	.15	.64**	.66**	(.85)					
9	Dominance Time 4	3.09	0.90	.11	.07	.07	-.14	.12	.32**	.19	.66**	(.86)				
10	Prestige Time 1	4.41	0.67	.20	.64**	.37**	.12	.22*	.53**	.30**	.13	.01	(.80)			
11	Prestige Time 2	4.61	0.51	.09	.42**	.67**	.36**	.25*	.18	.27**	.16	.16	.29**	(.73)		
12	Prestige Time 3	4.69	0.47	.06	.35**	.34**	.58**	.26*	.01	.04	-.05	-.14	.35**	.38**	(.73)	
13	Prestige Time 4	4.52	0.69	-.18	.34**	.25*	.21	.66**	.06	.11	-.16	-.15	.19	.42**	.28**	(.77)

Note: The range of total score is 0-16 for narcissism; 1-7 for mean peer-rated leadership, dominance and prestige. Cronbach α coefficients are presented in parentheses (nb. α s for leadership, dominance and prestige were averaged across group members). ** $p < .01$; * $p < .05$.